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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,961	07/01/2000	Stephen S. Miller		4302

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EXAMINER
HARTMAN JR, RONALD D

ART UNIT	PAPER NUMBER
2121	8

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/609,961	MILLER, STEPHEN S.	
	Examiner	Art Unit	
	Ronald D Hartman Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response the amendment filed on 3/25/2003 and now claims 1 and 3-38 are presented for examination.

2. By way of the amendment, claims 1 and 17-18 have been amended.

Response to Arguments

2. Applicant's arguments filed on 3/25/2003 have been fully considered but they are not persuasive for the following reasons as set forth below in this office action.

By way of amendment, the limitations of claim 2 have been incorporated into claim 1, and the applicant has presented one argument with respect to the previous office action's rejection over Dao.

The applicant has argued that Dao does not disclose, nor render obvious, an apparatus comprising a plurality of finger shaped sleeves (a control device taught as a glove, C1 L30-34 and C4 L55-59), wherein a microphone (Figure 1 element 104) and a control elements (Figure 1 elements 12, 14 and 16) are coupled (communicatively coupled by way of the processing circuit (Figure 1 element 18) to the control device. Furthermore, the applicant goes on to say that the examiner has failed to cite or state a motivation for combining a microphone, located on a glove, with the system of Dao in view of Wambach. This feature of the microphone being located on the glove is not in explicitly present in claims 1 and 3-26 and therefore, the applicant is attempting to argue features that are not specifically found in the claims. Furthermore, with regards to

claims 27-38, a feature wherein the microphone is located on the glove is believed to be an obvious variation of Daos' disclosed system since Dao clearly teaches that a microphone, through implementation of voice recognition software, may be used for controlling the computer, and since Dao also clearly teaches that a control device, such as a known data glove, is also used for controlling the computer, a feature wherein the microphone is actually located on the glove is believed to be an obvious variation of Dao's disclosed system since the cost and size of a microphone is very cheap and compact and since placing the microphone on the glove would not change of effect the overall operations of the system, but rather, would merely form an obvious variation of Dao's disclose system by simply providing the microphone, and its disclosed functional capabilities, on the glove itself. Therefore, for at least these reasons, the microphone being located on the glove would have been obvious to one of ordinary skill in the art at the time the invention was made.

Therefore, since the claims have not been amended to overcome the prior art of record, and since all the arguments, set forth by the applicant, have been responded to and are not deemed to be persuasive for at least the reasons set forth above, this action is made FINAL and a "repeated", previously made rejection, has been included herein for the applicant's convenience.

Claim Rejections - 35 USC § 103 (repeated)

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 3-11, and 13-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dao et al, U.S Patent No. 5,835,077 in view of Wambach, U.S Patent No.5,444,462.

5. As per claims 1, 7-8, 24, 27, 30-35 and 38, Dao teaches an apparatus (Figure 1 element 10) for controlling a computer (Figure 1 element 100) comprising a device that processes accelerometer readings for providing motion information pertaining the wearer of the apparatus (Figure 1 elements 12, 14 and 16). Furthermore, Dao teaches that the device may form any shape such as to form the shape of the user hand, and that the device may be attached to, if desired, to a users hand via a glove (C4 L55-60 and C1 L30-34). Dao does not specifically teach the use of finger sleeves and particular control elements being specifically located on at least one sleeve.

Wambach teaches a computer mouse glove that includes a plurality of finger like sleeves (Figure 1) wherein at least one sleeve houses at least one control element (Figure 1 elements 16, 18, 20, 22 or 24) and wherein the sleeves may detect finger motion for controlling an electronic device (C2 L39-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow Dao's disclosed functionality to be incorporated into the design of a specific finger like glove since it would form a more efficient means of cursor control, the intended direction of the claimed inventions, since incorporating the functionality into a glove would more realistically replicate the movement and motions a

user would have when interacting with a computer and would thereby form a more efficient means of inputting information to the remote computer via a user without the use or need of a keyboard or mouse, the intended use of both Dao and Wambach. Furthermore, it is noted that Dao's disclosed system is implemented using a fluid within the control device, whereas Wambach's disclosed system is not. This difference is noted, however, since it is the functionality of the disclosed combined system and the pending claimed invention which are one and the same, namely controlling a computer's cursor movement using a remote body worn device, and since Wambach is used to more clearly show the obviousness of specific control features or elements and their relative locations with regards to a glove, this difference is not considered by the examiner of record to be reason enough to not combine Dao and Wambach with regards to the pending application and its claims.

5. As per claim 1, 24 and 27-28, Dao teaches the use of a microphone for voice recognition is used so as to alleviate the need for a users hands (C14 L28-31).

6. As per claims 3, 19-21, 23 and 37, the use of a touch pad/ touch screen is an obvious variation of a button since its inclusion does not change or affect the overall outcomes of the system, but merely forms yet another means comparable to a button for inputting information to the remote computer, and since the use of touch pads is well known in the art of input devices, and since the combined system of Dao and Wambach, in essence, is to form an input device for alleviating modern mouse controls

via a body worn device, the inclusion of a touch pad is an obvious variation of the conventional button input means and its inclusion would have been obvious to one of ordinary skill in the art at the time the invention was made since it would form a more efficient input device by having less mechanical parts that are prone to breakage due repetitive pressing and depressing, which is often the case in a traditional computer mouse.

7. As per claim 4, Dao teach the incorporation of buttons (C5 L10-15).

8. As per claims 5-6, Dao teaches the operation of the computer via a wireless or wired connection (C5 L20-24).

9. As per claims 9-11, although not specifically taught, it is well known that computers are now used to control many different kinds of devices and appliances, from specific televisions and or appliances to entire homes, and therefore, a feature wherein a computer would control either a household appliance, a television, or another computer would be an obvious implementation of known computer control techniques and therefore would have been obvious to one of ordinary skill in the art at the time the invention was made.

10. As per claims 13-14, Dao teaches the use of a transmitting and receiving means (Figure 1, dotted lines).

11. As per claims 15-16 and 25-26, infrared frequency and radio frequency transmissions are well known in the art or portable remote computing devices such as a "data glove".

12. As per claims 17 and 29, the use of voice recognition for the purposes of inserting text within a remote computer software application is well known in the art.

13. As per claim 18, the use of voice recognition for the purposes of generating operating commands for a remote computer is well known in the art.

14. As per claims 22 and 36, Dao teaches the use of headgear (Figure 1 element 102).

15. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system of Dao as applied to claim 1 above, in view of Bartlett, U.S Patent No. 6,151,208.

As per claim 12, Bartlett teaches a hand worn miniature device that may be used as a portable phone (Figure 7 element 300) that may be implemented through translational movements as well as rotational movements of the user (C6 L55-61).

As per claim 12, although Bartlett teaches a device that does not include sensing circuitry located on individual fingers of the user, this modification would have been an

obvious variation of the disclosed combined system of Dao. That is, since the use of haptic devices such as a "data glove" are well known in the art, and since it has already been shown, via the combination of Dao and Wambach, that these devices may comprise a hand worn glove wherein control elements may be located on individual fingers for aiding in the implementation of a remote computing device by acting like a virtual mouse, the functionality of this virtual mouse would form a very efficient means of operating the worn device of Bartlett in that a hand worn phone, as described by Bartlett, since a user would be able to use the phone without the need for pushing buttons by providing a means of interpreting gestures or hand commands from motion sensing means provided for within the internal working circuitry of the device and therefore, the use of the device to function as a portable miniature phone would have been obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Ronald D. Hartman Jr.

Art Unit 2121

May 21, 2003

EMANUEL TODD VOELTZ
PRIMARY EXAMINER